Our Commitment Is to Your Health

While protecting public health is and always has been the foremost responsibility for water utilities, the events of September 11 brought this to the forefront of public consciousness.

Water utility employees protect public health every day in many ways — providing safe and reliable drinking water, providing enough pressure and quantity for fire protection and treating wastewater to standards that protect people and the environment.

The Water Department has taken steps since September 11 to increase the security at our facilities and is in close coordination with local law enforcement and public health agencies.

This report provides you with information about the drinking water you received in 2001. The Fort Worth Water Department treated almost 59 billion gallons of water last year and did so without any treatment, monitoring or reporting violations. Your water is treated to levels better than the minimum standards set by state and federal regulations, as illustrated by the charts on pages 4 & 5.

If there is something you don't understand, please call us at 817-FW-24-HRS (817-392-4477).

Mission Statement

To provide safe and reliable water and wastewater service with environmental integrity.

Vision Statement

As a result of our commitment to being a leading regional utility focused on customer service, employee development and infrastructure improvements, we will meet the demands of the changing demographics of our service area.

Notice to Special Populations

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immunocompromised persons, such as those undergoing chemotherapy for cancer, those who have undergone organ transplants, those who are undergoing treatment with steroids and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections.

You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

Contact Us

Website:
www.FortWorthgov.org/water/water.htm

Email address:
WPE@ci.fort-worth.tx.us

Customer Service Help/
Report main breaks/Sewer stops/
Water quality complaints/
Automated Account Information
(24 hours):

817-FW-24-HRS
(817-392-4477)

Visit Us

Customer Service Locations

Downtown
908 Monroe St.
Fort Worth, Texas 76102
Monday - Friday 7:30 a.m. to 5:30 p.m.

Southeast Office
4245 E. Berry St. at Miller Street
(inside Minyard's Food Store)

Monday - Friday	9 a.m. to 8 p.m.
Saturday	8 a.m. to 7 p.m.
Sunday	Noon to 5 p.m.

Northside Office
102 NW 28th St. at Main Street
(inside Carnival Food Store)

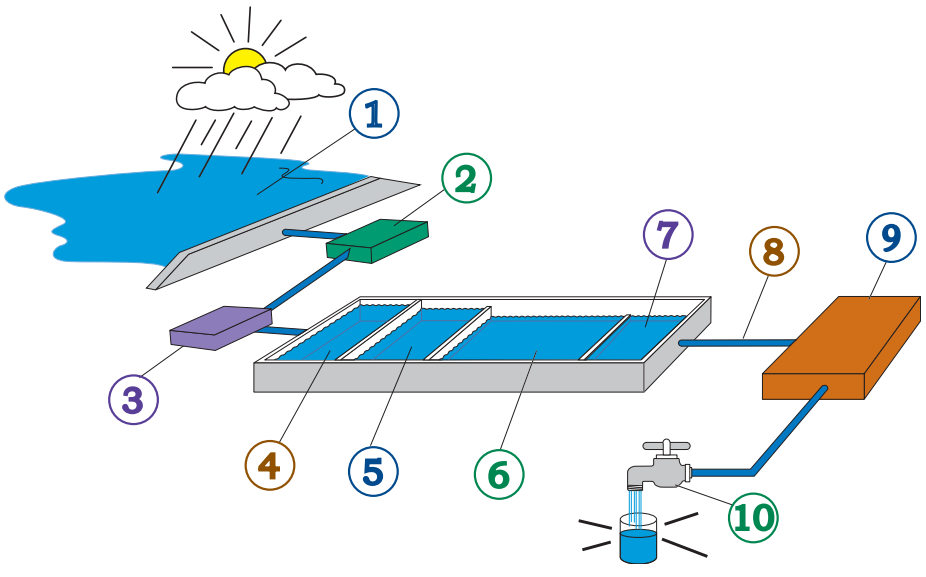
Monday - Friday	9 a.m. to 8 p.m.
Saturday	8 a.m. to 7 p.m.
Sunday	Noon to 5 p.m.

Administrative Offices
Fort Worth City Hall
1000 Throckmorton St.
8 a.m. to 5 p.m.

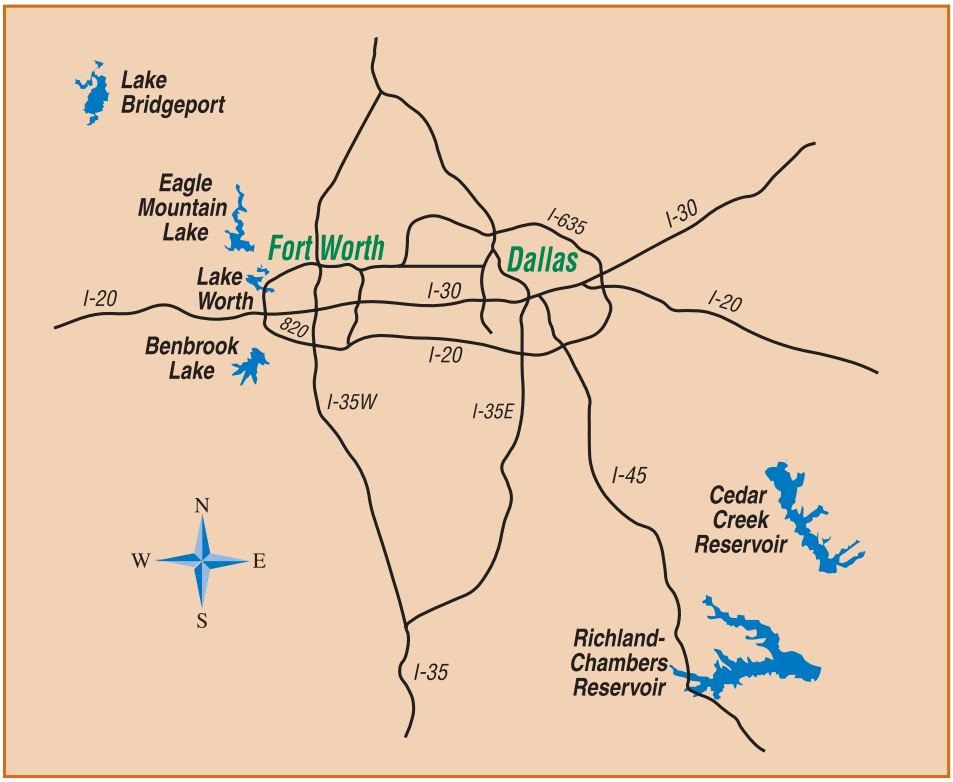
The Water Department is part of Fort Worth city government. The City Council meets each Tuesday at City Hall. Times vary. Call 817-871-8888 or check the web site to verify meeting time, date and location. (www.fortworthgov.org)

Water Treatment Process

1. Reservoirs: Fort Worth water comes from six lakes.
2. Raw water pump station: Here water is pumped from the lake to the water treatment plant.
3. Disinfection: Either ozone or chloramines (chlorine and ammonia) is added to kill bacteria and viruses. The Eagle Mountain Treatment Plant uses ozonation for primary disinfection. Rolling Hills, North Holly and South Holly Water Treatment plants presently use chloramines.`
4. Mixing Chamber: Chemicals, called polymers are added to the water to cause small particles to adhere to each other.
5. Coagulation basin: The particulate matter begins to clump together.
6. Sedimentation basin: Particles settle to the bottom of the basin and are removed.
7. Filters: Water is filtered through four feet of coal, sand and gravel.
8. Disinfection: Chloramines (chlorine and ammonia) are added to provide residual disinfection all the way to the customer's tap. The chlorine kills bacteria and viruses. Ammonia is added to reduce the chlorine odor and the amount of chlorine by-products created.
9. Clearwell storage: Water is temporarily stored in tanks before it is pumped to the public.
10. Distribution: Drinking water reaches the public through more than 2,400 miles of pipeline.



Where Do We Get Our Drinking Water?



Fort Worth uses surface water from six lakes — Lake Bridgeport, Eagle Mountain Lake, Lake Worth, Benbrook Lake, Cedar Creek Reservoir and Richland-Chambers Reservoir.

The City of Fort Worth owns Lake Worth. The U.S. Army Corps of Engineers is responsible for Benbrook Lake. The other four lakes are owned and operated by Tarrant Regional Water District (TRWD).

Fort Worth monitors water quality in Lake Worth and participates with TRWD to ensure the other lakes are regularly tested.

What Is Naturally in Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects is available from the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791 or at www.epa.gov.

As water travels over the land or through the ground, it dissolves naturally occurring minerals and radioactive material. It also can pick up substances resulting from animal waste or human activity.

To ensure tap water is safe to drink, EPA and Texas Natural Resource Conservation Commission prescribe regulations limiting the amount of certain contaminants in water provided by public systems.

The Food and Drug Administration (FDA) regulates limits for contaminants in bottled water that must provide the same protection for public health as tap water standards.

Learn more about water by visting the following web sites.

U.S. Environmental Protection Agency
www.epa.gov

Texas Natural Resource Conservation Commission
www.tnrcc.state.tx.us

American Water Works Association
www.awwa.org

Water Environment Federation
www.wef.org

If my water tastes or smells different does that mean it's not safe to drink?

Contaminants may be found in drinking water that may cause taste, color or odor problems. These types of problems are not necessarily causes for health concerns.

Taste and odor problems may originate in any lake for a number of reasons, such as algae growth, a change in temperature, excessive rainfall, flooding, drought or dry weather conditions.

Water that has been stored in a pipe for a long time, especially during warm weather, also may develop an odor. That is why you may notice a change in your water after returning from vacation.

How Well Did We Treat the Water?

Substance	Range of Detections	Level Found	MCL	MCLG	Possible Source of Substance
Regulated at the Treatment Plant					
Atrazine (ppb)	0 - 0.18	0.16	3	3	Agricultural herbicide runoff
Barium (ppm)	0.04 - 0.06	0.06	2	2	Erosion of natural deposits; discharge from metal refineries
Beta emitters (pCi/L)[1]	7.2	7.2	50	0	Erosion of natural deposits
Fluoride (ppm)	0.1 - 1.9	0.79	4	4	Water additive, natural geology
Nitrate (ppm) (measured as nitrogen)	0.04 - 0.29	0.29	10	10	Fertilizer runoff, septic tanks, sewage, animal waste
Turbidity (ntu)[2]	N/A	0.43*	TT	N/A	Soil runoff
		100%**	% of samples < 0.5 NTU		
[1]***Beta emitters:*** The state allows us to monitor for some contaminants less than once a year. This data is from the most recent sampling in 1999. [2]***Turbidity:*** *Must be less than 0.5 ntu in 95% of monthly samples. The 0.43 was the highest single reading at any of the city's four water treatment plants. **Lowest monthly percentage of samples less than 0.5 NTU.					
Regulated in the Distribution System					
Total Coliforms	0 - 0.44	Presence in <1% of monthly samples	Presence in 5% of monthly samples	0	Human & animal fecal waste
Total Trihalomethanes (ppb)	4 - 51	46	100	0	By-products of chlorine disinfection
Proposed Standards					
Bromate (ppb)	0 - 8	1	10	0	By-product of ozone disinfection
Haloacetic Acids (ppb)	2 - 28	17	60	0	By-product of ozone disinfection
Bromodichloromethane (ppb)	2 - 23	18	Not Regulated	0	By-product of chlorine disinfection
Bromoform (ppb)	0 - 4	2	Not Regulated	0	By-product of chlorine disinfection
Chloroform (ppb)	1 - 24	20	Not Regulated	0	By-product of chlorine disinfection
Dibromochloromethane (ppb)	0 - 20	13	Not Regulated	60	By-product of chlorine disinfection
Chloral Hydrate (ppb)	0 - 1	0.6	Not Regulated	0	By-product of chlorine disinfection
Trichloroacetic Acid (ppb)	0 - 10	4	Not Regulated	300	By-product of ozone disinfection
Dichloroacetic Acid (ppb)	1 - 13	9	Not Regulated	0	By-product of ozone disinfection

Abbreviations Used in the Charts

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

ppm - Parts per million

ppb - Parts per billion

ntu - Nepholometric Turbidity Units are used to measure water turbidity or clarity.

TT (Treatment Technique) - A required process intended to reduce the level of a contaminant in drinking water.

Action Level - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Turbidity - a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

pCi/L - Picocuries per liter is a measure of radioactivity in water. A picocurie is 10^{-12} curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

Lead and Copper Test Results

Regulated at the Customer's Tap					
Substance	*90th Percentile Values[2]*	*# of Sites Exceeding Action Level*	*MCL*	*MCLG*	*Possible Source of Substance*
Lead[1] (ppb)	5.6	2	Action Level = 15	15	Corrosion of customer plumbing, service connection
Copper[1] (ppm)	0.372	0	Action Level = 1.3	1.3	Corrosion of customer plumbing, service connection

[1]The state allows us to monitor for these contaminants less than once a year. This data is from the most recent sampling in 1999.
[2]***90th percentile value:*** 90 percent of the samples were at or below this value. EPA considers the 90th percentile value the same as an "average" value for other contaminants.

Cryptosporidium, Giardia & Viruses

Fort Worth's 2001 testing of lake water detected low levels of *Cryptosporidium*, *Giardia* and viruses. Required levels of inactivation are achieved through disinfection and filtration.

These are microscopic organisms common in surface water. They come from animal feces in the watershed. When ingested, *Cryptosporidium* and *Giardia* can cause diarrhea, cramps and fever.

No specific drug therapy has proven effective, but people with healthy immune systems usually recover within two weeks. Individuals with weak immune systems, however, may be unable to clear the parasite and suffer chronic and debilitating illness.

Secondary Constituents

The chart below lists other items for which the water is tested. These items do not relate to public health but rather to the aesthetic effects. These parameters are often important to industrial water users.

Constituent	***Range***	***MCL***
Calcium (ppm)	34 - 55	Not Regulated
Chloride (ppm)	16 - 48	250
Magnesium (ppm)	3 - 10	Not Regulated
Sodium (ppm)	13 - 37	Not Regulated
pH (units)	7.8 - 8.7	6.5-8.5
Bicarbonate (ppm)	98 - 154	Not Regulated
Carbonate (ppm)	0	Not Regulated
Total Hardness as $CaCO_3$ (ppm)	119 - 163	Not Regulated
Total Alkalinity as $CaCO_3$ (ppm)	80 - 126	Not Regulated
Phenol Alkalinity as $CaCO_3$ (ppm)	0	Not Regulated
Total Dissolved Solids (ppm)	176 - 257	500
Conductivity (µmhos/cm)	340 - 518	Not Regulated
Sulfate (ppm)	36-47	250 (Proposed)

Fort Worth Switching To Ozone Disinfection

Ozone. Most people associate it with air quality and something unhealthy. When it comes to drinking water, ozone is good. Ozone (O_3) is a powerful disinfectant — more powerful than chlorine in some ways.

Fort Worth's Eagle Mountain Water Treatment Plant was the first in Texas to use ozone for primary disinfection.

In Spring 2003, Rolling Hills Water Treatment Plant will disinfect water with ozone. Over the next five years, the North and South Holly Water Treatment Plants will add ozone.

There are several reasons for adding ozone disinfection. Ozone is effective against *Cryptosporidium*, whereas chlorine is not.

Ozone will further reduce total trihalomethane (THM) levels. THMs are by-products formed by the reaction of chlorine with the organic matter (decayed leaves, twigs, etc.) in raw water. EPA considers THMs a possible carcinogen and allowable levels are being reduced.

Ozone allows us to reduce chemical costs. We can use less coagulants to settle out the organic particles because ozone oxidizes the organic matter.

Ozone substantially reduces taste and odor problems.

We will still use chloramines to provide disinfection all the way to your tap. Ozone does not last after contacting the organic matter.

Fort Worth Water System Facts

Year Established	1885
Annual System Pumpage	58,953,640,000 gallons (2001)
Maximum Day Usage	320.87 million gallons on Sept. 4, 2000
Maximum Day Pumpage	315.61 million gallons on Sept. 5, 2000
System Capacity	355 million gallons per day (2001)
Average Daily Demand	161.52 million gallons per day
Retail Service Connections	160,000
# of Wholesale Water Customers	29
Miles of Distribution Line	2,448

Major Water System Improvements

The Water Department has several major projects designed to improve our system and accommodate growth. A couple of them are lited below.

★ Construction of ozonation systems for Rolling Hills Water Treatment Plant

★ Replacement of filters at North Holly Water Treatment Plant

What should I do if I think there's something wrong with my water?

Call 817-FW-24-HRS (817-392-4477). Your complaint will be taken and forwarded to our laboratory, which will collect a sample from the outside tap nearest your water meter.

Will using a home treatment device make my water safer or healthier?

Not necessarily. Some people use home water filters to improve the taste, smell and/or appearance of their tap water, but it may not make the water safer or healthier.

Do you have questions about this report?

The City of Fort Worth Water Department will hold a community meeting to answer your questions about drinking water. It is set for Thursday, July 11 at 7 p.m. at East Regional Library, 6300 Bridge St.

Protecting Our Water Supplies

Numerous developments are being planned in the Lake Worth and Eagle Mountain Lake watersheds.

History has shown development without adequate long-range infrastructure planning leads to problems for residents and the environment.

We know that our area's aquifer is incapable of supporting the proposed development. Plus, individual wells or small water systems do not provide fire protection. Failure to plan for adequate systems that meet fire codes also provides long-term problems for the community.

The Fort Worth Water Department sought and has received the state's authorization to establish its water service area beyond the city limits. This authorization is called a Certificate of Convenience and Necessity (CCN).

A CCN gives a water provider exclusive rights to be the service provider for a specific geographic area. New development in most of Tarrant and a portion in Wise counties now can occur with a superior water system provider.

A key element in providing safe drinking water is starting with raw water that is as clean as possible.

Fort Worth is also planning for expanded sewer services.

A proliferation of septic systems or small package wastewater treatment plants discharging into the lakes would harm our water supply source.

Septic system failures can have a detrimental effect on water quality. Small package treatment plants may have less stringent requirements for how well they must treat the wastewater they discharge.

Over the next several years, Texas Natural Resource Conservation Commission will assess our water supply lakes and all Texas water bodies.

We know the herbicide atrazine is a concern for Richland-Chambers Reservoir.

Atrazine is used to kill weeds without harming crops. It enters the lake through runoff. Tarrant Regional Water District works with farmers to minimize atrazine's impact on the water supply.

Fort Worth monitors the raw water for atrazine and adds powdered activated carbon (PAC) to the treatment process when atrazine is detected at one part per billion. The maximum amount of atrazine allowed in drinking water is three parts per billion.

PAC has shown effectiveness in lowering atrazine levels.